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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,767	05/14/2001	Kenichi Hamanaka	P/1071-1329	8896

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EXAMINER

MEDLEY, MARGARET B

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,767

Applicant(s)

HAMANAKA ET AL.

Examiner

Margaret B. Medley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This office action is in response to Paper No. 12 dated June 16, 2003.

The amendment to claims 1, 3 and 5, the withdrawal of claims 6-11 and the addition of claims 12-20 in Paper No. 12 have been entered of record.

Applicant's election with traverse of Group I (claims 1-5) in Paper No. 12 is acknowledged. The traversal is on the ground(s) that it is not seem how the adhesive resin of Group I could be made by mixing ferrite powder with a cured matrix resin and achieve an adhesive composition. Further the classification of Group I and II are both class 524, subclass 430. This is not found persuasive because of the reason made of record in Paper No. 5 dated July 25, 2002 and applicants have not presented persuasive arguments that the composition adhesive cannot be made with a cured matrix resin.

The requirement is still deemed to be proper and therefore the restriction requirement is made final.

Applicants are required to follow the procedure outlined in the MPEP for filing a petition along with the proper fee. The response in Paper No. 12 will not be treated as a petition.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. under 35 U.S.C. 103(a) as obvious over Ishino et al (Ishino) 4,116,906 as applied to claim s1-5 above, and further in view of Sasaki et al (Sasaki) 4,247,443.

Ishino teaches a resin composition comprising 20-260 parts of ferrite powder, 40-680 parts iron powder of 1-300 microns size, 100 parts of an organic high molecular weight compound and 20-3000 parts of organic solvent that the organic compound is soluble therein, see column 2, lines 4-30 and claims 1, 3-4 and 6-7. Ishino clearly teaches that the organic compound include polyimide resins, see column 1, line 60, which anticipates instant claim 1-5 when the liquid matrix resin is (B) a resin having an imide bond and being capable of dissolving in a organic solvent.

Applicant further requires the liquid matrix containing a polyamic acid and of specific tetracarboxylic anhydride and a diamine, instant claims 12-20 wherein Ishino is silent to said teachings.

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Sasaki teaches that polyamic acids are precursors of polyimides, column 2, lines 7-20 and are produced from tetracarboxylic anhydrides, column 5, lines 9-22 reacted with diamines, column 5, lines 23-25 and 58 to column 6, line 10, that are the same anhydrides and diamines of instant claims 12-20.

It would be obvious to the artisan in the art to select the anhydrides and diamines of Sasaki that have been commercially known as polyamic acids used as precursors for polyimides for the polyamic acids of Ishino to further render obvious the teaching of Ishino that the organic compounds include polyimide resins that are soluble in the organic solvent and comprises a dispersion of ferrite powder and iron powders contained in its solution, see column 1, lines 32-37.

The 20-260 parts of ferrite powder of Ishino overlaps the 200-1500 parts of ferric powder of instant claim 3 and therefore anticipates the lower range portion of instant claim 3. Thus since the components and the relative proportion of the composition of Ishino are the same as those of the instant the composition of Ishino is deemed to contain the same adhesive properties.

Claims 1-3 are rejected under 35 U.S.C. 103 (b) as being obvious over by JP 01267363A, see the English Abstract as applied to claims 1-3 further in view of Sasaki et al (Sasaki) 4,247,443.

The Japanese patentee teaches and discloses electrodes made of resin found magnetic composition containing 80-90 wt.% ferromagnetic powder and 5-20 wt.% high heat resistant thermosetting resin powder, e.g., prepolymer obtained from the reaction of the bisimide compound of unsaturated dicarboxylic acid with a polyamine compound

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having at least two amino groups, see the English abstract. The composition of the Japanese reference is deemed to contain adhesive properties since the compositions contain the same components in the same relative proportion as those of the instant claims of record.

Applicant further requires the liquid matrix containing a polyamic acid and of specific tetracarboxylic anhydride and a diamine, instant claims 12-20 wherein the Japanese patent is silent to said teachings.

Sasaki teaches that polyamic acids are precursors of polyimides, column 2, lines 7-20 and are produced from tetracarboxylic anhydrides, column 5, lines 9-22 reacted with diamines, column 5, lines 23-25 and 58 to column 6, line 10, that are the same anhydrides and diamines of instant claims 12-20.

It would be obvious to the artisan in the art to select the anhydrides and diamines of Sasaki that have been commercially known as polyamic acids used as precursors for polyimides for the polyamic acids of JP-'363 to further render obvious the teaching of the Japanese '363 patent that the organic compounds include polyimide resins that are soluble in the organic solvent and comprises a dispersion of ferrite powder and iron powders contained in its solution, see abstract.

Claim 5 is rejected under 35 U.S.C. 103 (b) as being obvious over Tanino et al (Tanino) 4,808,326 or its EP 225,392 counterpart as applied to claim 5 further in view of Sasaki et al (Sasaki) 4,247,443.

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In Tanino see Examples 1-9 and 10 of Tables 1-2 that contains ferrite powders of 80-95 wt.% having a size of 50 to 300 mesh, 5-20 wt.% of thermosetting resin powder, e.g., polyimide produced by adding diaminodiphenylmethane to bismaleinide produced by reacting maleic anhydride with diaminodiphenylmethane, see column 5, lines 37-42, and a metal chelate. Applicant further requires the liquid matrix containing a polyamic acid and of specific tetracarboxylic anhydride and a diamine, instant claims 12-20 wherein Ishino is silent to said teachings.

Sasaki teaches that polyamic acids are precursors of polyimides, column 2, lines 7-20 and are produced from tetracarboxylic anhydrides, column 5, lines 9-22 reacted with diamines, column 5, lines 23-25 and 58 to column 6, line 10, that are the same anhydrides and diamines of instant claims 12-20.

It would be obvious to the artisan in the art to select the anhydrides and diamines of Sasaki that have been commercially known as polyamic acids used as precursors for polyimides for the polyamic acids of Tanino to further render obvious the teaching of Tanino that the organic compounds include polyimide resins that are soluble in the organic solvent and comprises a dispersion of ferrite powder and iron powders contained in its solution, see column 5, lines 37-42 and Examples 1-9 and 10 of Tables 1-2.

Claims 1-3 are rejected under 35 U.S.C. 103(b) as being obvious over JP-2304A as applied to claims 1-3 further in view of Sasaki et al (Sasaki).

JP-2304 teaches 100 g ferrite powder and 4 g of an organic adhesive, e.g., polyimide, note the English abstract.

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Applicant further requires the liquid matrix containing a polyamic acid and of specific tetracarboxylic anhydride and a diamine, instant claims 12-20 wherein JP-2304-A is silent to said teachings.

Sasaki teaches that polyamic acids are precursors of polyimides, column 2, lines 7-20 and are produced from tetracarboxylic anhydrides, column 5, lines 9-22 reacted with diamines, column 5, lines 23-25 and 58 to column 6, line 10, that are the same anhydrides and diamines of instant claims 12-20.

It would be obvious to the artisan in the art to select the anhydrides and diamines of Sasaki that have been commercially known as polyamic acids used as precursors for polyimides for the polyamic acids of JP-2304-A to further render obvious the teaching of JP-2304A that the organic compounds include polyimide resins that are soluble in the organic solvent and comprises a dispersion of ferrite powder and iron powders contained in its solution, see English abstract.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being obvious over Suzuki et al (Suzuki) 6,342,557 B1 as applied to claims 1-5 further in view of Sasaki et al (Sasaki) 4,247,443.

Suzuki teaches a resin composition and molded or formed product comprising 100 parts synthetic resin and 50 to 1,400 parts of a ferrite powder of 2 to 1,000 microns, see abstract, column 4, lines 17-21. Suzuki clearly teaches that the resin composition include polyimide resins, see column 4, lines 55-56.

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Applicant further requires the liquid matrix containing a polyamic acid and of specific tetracarboxylic anhydride and a diamine, instant claims 12-20 wherein Suzuki is silent to said teachings.

Sasaki teaches that polyamic acids are precursors of polyimides, column 2, lines 7-20 and are produced from tetracarboxylic anhydrides, column 5, lines 9-22 reacted with diamines, column 5, lines 23-25 and 58 to column 6, line 10, that are the same anhydrides and diamines of instant claims 12-20.

It would be obvious to the artisan in the art to select the anhydrides and diamines of Sasaki that have been commercially known as polyamic acids used as precursors for polyimides for the polyamic acids of Suzuki to further render obvious the teaching of Suzuki that the organic compounds include polyimide resins that are soluble in the organic solvent and comprises a dispersion of ferrite powder and iron powders contained in its solution, see column 4, lines 17-21 and 55-56.

The 50 to 1,400 parts ferrite powder of Suzuki overlaps the 200-1,500 parts of ferrite powder of instant claim 3 and therefore anticipates the lower range portion of instant claim 3. Thus since the components and the relative proportion of the components of Suzuki are the same as those of the instant claims the composition of Suzuki is deemed to contain adhesive properties.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (Suzuki) 5,510,412 as applied to claims 1-5 further in view of Sasaki et al (Sasaki) 4,247,443.

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Suzuki teaches a resinous composition comprising 80-95 wt.% of ferrite powder having particle size of 1-200 microns, see abstract and column 4, lines 4-5 and 5-20 wt.% of a resin component comprising 70-99.5 wt.% of a polyarylene sulfide resin and 0.5-30 wt.% of polyethylene wherein the resin component further comprises an additional resin, that include a resin containing an imide group, see column 3, lines 31-35 and 40-41. It is further disclosed that the additional resin is present in 29.5 wt.% of the total resin composition, see column 3, lines 42-45.

The 1.66-10 wt.% of the polyimide resin to 70-99.5 wt.% of ferrite of Suzuki overlaps the 100 parts wt. resin to 200-1500 parts wt. ferrite of instant claim 3 and thus render instant claims 1-5 obvious. Since the components in the composition of Suzuki overlaps that of the instant claim, the composition of Suzuki is deemed to contain adhesive properties.

Applicant further requires the liquid matrix containing a polyamic acid and of specific tetracarboxylic anhydride and a diamine, instant claims 12-20 wherein Ishino is silent to said teachings.

Sasaki teaches that polyamic acids are precursors of polyimides, column 2, lines 7-20 and are produced from tetracarboxylic anhydrides, column 5, lines 9-22 reacted with diamines, column 5, lines 23-25 and 58 to column 6, line 10, that are the same anhydrides and diamines of instant claims 12-20.

It would be obvious to the artisan in the art to select the anhydrides and diamines of Sasaki that have been commercially known as polyamic acids used as precursors for polyimides for the polyamic acids of Suzuki to further render obvious the teaching of

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Suzuki that the organic compounds include polyimide resins that are soluble in the organic solvent and comprises a dispersion of ferrite powder and iron powders contained in its solution.

Applicant's arguments with respect to claims 1-5 and newly added claim 12-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art cited and not relied upon further teaches compositions comprising ferrite powders and matrix resin of the same or similar compositions as that of the instant claims.

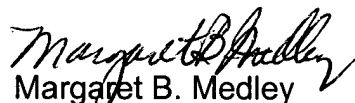
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is 703-

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308-2518. The examiner can normally be reached on Monday-Friday from 7:30 am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Margaret B. Medley
Primary Examiner
Art Unit 1714

MBM
August 14, 2003